

---

## SHORT NOTES

---

### The Use of Small Pebbles in the Web Retreat of a Comb-footed Spider, *Achaearanea* sp. (Araneae: Theridiidae)

The comb-footed spiders of the family Theridiidae typically construct a three-dimensional tangle web, or cob-web, often in a sheltered site. A retreat where the spider resides is sometimes made towards the centre of the web. This retreat is usually conical in shape (with the point uppermost) if constructed wholly of silk, but the shape may be altered if other building materials are incorporated.

In December 1991 a number of *Achaearanea* sp. spiders were observed establishing themselves under the window-sill of a recently constructed house at Humpty Doo, Northern Territory. The window had a northerly aspect and was protected by the roof of a verandah, approximately 3.2 m wide. The webs of the spiders were similar to other theridiid webs observed by the author, albeit rather sparse. The construction of the retreat, however, was unusual. A number of tiny pebbles were incorporated into the silk of the retreat, in some cases packed quite tightly. Similar pebbles were found scattered over a section of the paved floor of the verandah, one metre below the web site. The pebbles were up to 3 mm in diameter, often larger than the spiders' abdomen.

As the months passed, and as other webs and retreats appeared, the incidence of pebbles as the major component of retreats decreased. In order to establish whether the use of the pebbles was dependant on the type of material available, two spiders were removed from their "pebblecrete" retreats, and placed in separate jars. The floor of the jars were covered in material gathered from below the web sites, mostly small pebbles, sand grains and pieces of dry leaves, presumably blown in from the yard. Within several days the reconstruction of the retreats had begun. The spiders used the smaller building materials such as the sand and leaf components rather than the larger, heavier pebbles.

Subsequently I found a new web and retreat, which was built directly over an ants' nest, and composed of sand grains deposited by the ants. Other retreats observed nearby in pot-plants were constructed from fragments of potting mix. These observations suggest that the original pebble retreats were constructed using the only material available at the time. With the availability of a wider variety of building material in the immediate area, the occurrence of the larger pebbles in the retreat decreases. Use of such heavy building

---

materials must have a considerable energetic cost, indicating a high premium for unreinforced retreats.

I thank Dr Mike Gray (Australian Museum) for identification of the specimen, and Drs Mark Harvey (WA Museum), Alice Wells (ABRS) and Richard Noske (NTU) for comments on the text.

JENNI WEBBER, *Museum & Art Gallery of the Northern Territory, Darwin, GPO Box 4646, Darwin, N.T., 0801*

\* this article was originally published in *Australasian Arachnology*, no. 45.

---

## Observations of the Port Darwin Sea Snake *Hydrelaps darwiniensis*

The Port Darwin Sea Snake *Hydrelaps darwiniensis* (Hydrophiidae), was named from two specimens collected near Darwin (Boulenger 1896). Since then little has been added to our knowledge of the species except that it lives in mangrove areas in northern Australia and feeds on mudskippers (*Periophthalmus*) (Gow 1989; Cogger 1992). It is reported to swim along the water line of rising or falling tides investigating crab holes in compacted to relatively soft mud (Ehmann 1992). Six specimens were retrieved from the stomachs of sharks that were netted within Darwin Harbour in the Frances Bay region (Lyle & Timms 1987).

On 17 October 1992, we observed several *H. darwiniensis* from a dinghy on Sadgrove's Creek, Darwin, where the species had been recorded previously (J. Lyle pers. comm.). Four hours of careful checking of the mangrove-lined streams during low tide proved fruitless. At 15:00, however, as the tide began to rise, a single *H. darwiniensis* was seen leaving the water and crawling onto a bank of consolidated mud. It then moved into a nearby crab burrow to emerge some minutes later from a neighbouring burrow. Another three individuals were seen within 30 minutes of the first, but none in the subsequent two hours. These observations, albeit limited, indicate that the species is diurnal, and that it probably feeds out of the water.

---